

IN THE CLAIMS:

Substitute the following claims for the pending claims having the same numbers.

1. (currently amended) An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the vibrating assembly includes a lift reversal device which produces alternating lift coefficients in the vibrating assembly in response to the fluid flow across the vibrating assembly , the lift coefficients alternating as an angle of attack of the fluid flow across the vibrating assembly increases.

2. (original) The system according to claim 1, wherein the vibrating assembly vibrates in response to the alternating lift coefficients in the vibrating assembly.

3. (original) The system according to claim 1, wherein the lift reversal device is generally rectangular prism-shaped.

4. (original) The system according to claim 1, wherein the vibrating assembly further includes an elastic support for the lift reversal device, the elastic support biasing the lift

reversal device toward a neutral position against lift forces produced by the fluid flow.

5. (original) The system according to claim 1, wherein the generator includes an electromagnetically active material, and wherein strain is produced in the material in response to displacement of the vibrating assembly.

6. (original) The system according to claim 1, wherein the generator includes a magnet and coil, and wherein relative displacement between the magnet and coil produces electricity in the coil in response to displacement of the vibrating assembly.

7. (original) The system according to claim 6, wherein a magnetic field produces electricity in the coil in response to strain being produced in an electromagnetically active material of the generator.

8. (original) The system according to claim 6, wherein the generator further includes at least two of the magnets, and wherein a ferromagnetic spacer positioned between the magnets concentrates magnetic fields produced by the magnets.

9. (original) The system according to claim 6, wherein displacement of the vibrating assembly in response to the fluid flow is initiated by applying an electric potential to the coil.

10. (original) The system according to claim 6, wherein a passage extends between opposite ends of the coil, and wherein the passage is in fluid communication with the fluid flowing across the vibrating assembly at each opposite end of the coil.

11. (original) The system according to claim 1, wherein the generator includes a magnet which is displaced relative to a ferromagnetic core, thereby producing electricity in a coil in response to displacement of the vibrating assembly.

12. (original) The system according to claim 1, wherein the generator includes a housing which is displaced in response to displacement of the vibrating assembly, wherein the housing contains a magnet and a coil, and wherein relative displacement between the magnet and coil produces electricity in the coil in response to displacement of the housing.

13. (original) The system according to claim 1, wherein the generator includes first and second magnets, and a coil, wherein relative displacement between the first magnet and the coil is produced in response to displacement of the vibrating assembly, and wherein magnetic fields produced by the first and second magnets bias against relative displacement between the first and second magnets.

14. (original) The system according to claim 1, wherein the generator includes a magnet and coil, and wherein relative

rotation between the magnet and coil is produced in response to displacement of the vibrating assembly.

15. (original) The system according to claim 1, wherein the vibrating assembly displaces in response to fluid flow in a wellbore of a subterranean well.

16-31. (canceled)

32. (original) An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes a magnet and coil, and wherein relative rotation between the magnet and coil is produced in response to displacement of the vibrating assembly.

33. (original) The system according to claim 32, wherein the magnet and coil are contained within a housing.

34. (original) The system according to claim 33, wherein the housing isolates the magnet and coil from the fluid flow.

35. (original) The system according to claim 33, wherein the housing is positioned at a center of rotation of the vibrating assembly.

36. (original) The system according to claim 32, wherein the vibrating assembly displaces in response to fluid flow in a wellbore of a subterranean well.

37. (original) An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes first and second magnets, and a coil, wherein relative displacement between the first magnet and the coil is produced in response to displacement of the vibrating assembly, and wherein magnetic fields produced by the first and second magnets bias against relative displacement between the first and second magnets.

38. (original) The system according to claim 37, wherein the first magnet and the coil are contained within a housing.

39. (original) The system according to claim 38, wherein the housing isolates the first magnet and coil from the fluid flow.

40. (original) The system according to claim 38, wherein the housing remains substantially rigidly mounted while the second magnet displaces in response to displacement of the vibrating assembly.

41. (original) The system according to claim 37, wherein the vibrating assembly displaces in response to fluid flow in a wellbore of a subterranean well.

42. (original) An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes a housing which is displaced in response to displacement of the vibrating assembly, wherein the housing contains a first magnet and a coil, and wherein relative displacement between the first magnet and coil produces electricity in the coil in response to displacement of the housing.

43. (original) The system according to claim 42, wherein the first magnet is supported relative to the coil by at least one biasing device.

44. (original) The system according to claim 43, wherein the biasing device includes a spring.

45. (original) The system according to claim 43, wherein the biasing device includes an elastomeric member.

46. (original) The system according to claim 43, wherein the biasing device includes a compressed fluid.

47. (original) The system according to claim 43, wherein the biasing device includes at least one second magnet.

48. (original) The system according to claim 47, wherein at least one pole of the second magnet repels at least one pole of the first magnet.

49. (original) The system according to claim 42, wherein displacement of the vibrating assembly in response to the fluid flow is initiated by applying an electric potential to the coil.

50. (original) The system according to claim 49, wherein the application of an electric potential to the coil displaces the vibrating assembly relative to the fluid flow.

51. (original) The system according to claim 49, wherein the application of an electric potential to the coil produces

strain in an elastic support which supports the vibrating assembly.

52. (original) The system according to claim 42, wherein the vibrating assembly displaces in response to fluid flow in a wellbore of a subterranean well.

53. (original) An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes a magnet which is displaced relative to a ferromagnetic core, thereby producing electricity in a coil in response to displacement of the vibrating assembly.

54. (original) The system according to claim 53, wherein the magnet is aligned with a longitudinal axis of the vibrating assembly.

55. (original) The system according to claim 53, wherein the ferromagnetic core is aligned with a longitudinal axis of the vibrating assembly.

56. (original) The system according to claim 53, wherein the coil is aligned with a longitudinal axis of the vibrating assembly.

57. (original) The system according to claim 53, wherein the coil and ferromagnetic core remain substantially rigidly mounted while the magnet is displaced in response to displacement of the vibrating assembly.

58. (original) The system according to claim 53, wherein the generator further includes multiple magnets which are displaced relative to respective multiple ferromagnetic cores, thereby producing electricity in respective multiple coils in response to displacement of the vibrating assembly.

59. (original) The system according to claim 53, wherein the vibrating assembly displaces in response to fluid flow in a wellbore of a subterranean well.

60. (original) An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes a magnet and coil, wherein relative displacement between the magnet and coil produces

electricity in the coil in response to displacement of the vibrating assembly, wherein a passage extends between opposite ends of the coil, and wherein the passage is in fluid communication with the fluid flowing across the vibrating assembly at each opposite end of the coil.

61. (original) The system according to claim 60, wherein the magnet is aligned with a longitudinal axis of the vibrating assembly.

62. (original) The system according to claim 60, wherein the coil is aligned with a longitudinal axis of the vibrating assembly.

63. (original) The system according to claim 60, wherein the coil remains substantially rigidly mounted while the magnet is displaced in response to displacement of the vibrating assembly.

64. (original) The system according to claim 60, wherein the vibrating assembly displaces in response to fluid flow in a wellbore of a subterranean well.

65. (original) An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes a magnet and coil, wherein relative displacement between the magnet and coil produces electricity in the coil in response to displacement of the vibrating assembly, and wherein displacement of the vibrating assembly in response to the fluid flow is initiated by applying an electric potential to the coil.

66. (original) The system according to claim 65, wherein the application of the electric potential to the coil displaces the vibrating assembly relative to the fluid flow.

67. (original) The system according to claim 65, wherein the application of the electric potential to the coil produces strain in an elastic support which supports the vibrating assembly.

68. (original) The system according to claim 65, wherein the vibrating assembly displaces in response to fluid flow in a wellbore of a subterranean well.

69. (currently amended) An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly in a wellbore of a subterranean well; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly.

70. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly, and

wherein electricity is produced in a coil of the generator in response to strain being produced in the electromagnetically active material.

71. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly, and

wherein the electromagnetically active material is a magnetostrictive material.

72. (original) The system according to claim 69, wherein the electromagnetically active material is a piezoelectric material.

73. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly, and

wherein the electromagnetically active material is an electrostrictive material.

74. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly, and

wherein the generator further includes a magnet and coil, and wherein relative displacement between the magnet and coil produces electricity in the coil in response to displacement of the vibrating assembly.

75. (original) The system according to claim 74, wherein a magnetic field produces electricity in the coil in response to strain being produced in the electromagnetically active material.

76. (original) The system according to claim 74, wherein the generator further includes at least two of the magnets, and wherein a ferromagnetic spacer positioned between the magnets concentrates magnetic fields produced by the magnets.

77. (original) The system according to claim 74, wherein displacement of the vibrating assembly in response to the fluid flow is initiated by applying an electric potential to the coil.

78. (original) The system according to claim 74, wherein a passage extends between opposite ends of the coil, and wherein the passage is in fluid communication with the fluid flowing across the vibrating assembly at each opposite end of the coil.

79. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly, and

wherein the generator includes a magnet which is displaced relative to a ferromagnetic core, thereby producing electricity in a coil in response to displacement of the vibrating assembly.

80. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the

electromagnetically active material in response to displacement of the vibrating assembly, and

wherein the generator includes a housing which is displaced in response to displacement of the vibrating assembly, wherein the housing contains a magnet and a coil, and wherein relative displacement between the magnet and coil produces electricity in the coil in response to displacement of the housing.

81. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly, and

wherein the generator includes first and second magnets, and a coil, wherein relative displacement between the first magnet and the coil is produced in response to displacement of the vibrating assembly, and wherein magnetic fields produced by the first and second magnets bias against relative displacement between the first and second magnets.

82. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly, and

wherein the generator includes a magnet and coil, and wherein relative rotation between the magnet and coil is produced in response to displacement of the vibrating assembly.

83. (original) The system according to claim 69, wherein the vibrating assembly includes a lift reversal device which produces alternating lift coefficients in the vibrating assembly in response to the fluid flow across the vibrating assembly.

84. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly, and

wherein the vibrating assembly displacement is transmitted to the electromagnetically active material across a membrane isolating the material from the fluid flow.

85. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the electromagnetically active material in response to displacement of the vibrating assembly, and

wherein displacement of the vibrating assembly in response to the fluid flow is initiated by applying an electric potential to the electromagnetically active material.

86. (currently amended) ~~The system according to claim 69,~~
An electrical power generating system, comprising:

a vibrating assembly which displaces in response to fluid flow across the vibrating assembly; and

a generator which generates electrical power in response to displacement of the vibrating assembly,

wherein the generator includes an electromagnetically active material, strain being produced in the

electromagnetically active material in response to displacement
of the vibrating assembly, and

wherein displacement of the vibrating assembly in response to the fluid flow is initiated by applying a magnetic field to the electromagnetically active material.

87. (original) The system according to claim 69, wherein displacement of the vibrating assembly in response to the fluid flow is initiated by producing strain in the electromagnetically active material.

88-114. (canceled)